

IN THE CLAIMS:

1-111. (Cancelled)

112. (Currently Amended) A PDP manufacturing method, for manufacturing a PDP comprising a front plate and a back plate, on at least one of which discharge electrodes have been arranged and on at least one of whose inner surfaces a blue phosphor layer containing BaMgAl₁₀O₁₇:Eu has been formed, the front and back plates being sealed together so that an inner space is formed therebetween, and an aging process then being performed by applying a required discharge voltage to the discharge electrodes while a discharge gas is present in the inner space,

the aging process comprising:

an introducing process for newly introducing discharge gas with a partial steam pressure of no more than 15 Torr into the inner space from outside; and

an evacuating process for evacuating the discharge gas from the inner space,

a discharge produced when a required discharge voltage is applied to the discharge electrodes being divided into a plurality of discharge periods, and the introducing process being performed together with the evacuating process in intervals between discharge periods, enabling the discharge gas to be circulated through the inner space.

113-125. (Cancelled)

126. (Previously Presented) The PDP manufacturing method of Claim 112, wherein the discharge gas introduced into the inner space is a dry gas.

127. (Previously Presented) The PDP manufacturing method of Claim 112, wherein
the introducing process introduces the discharge gas via a first air vent formed in the panel;
the evacuating process evacuates the introduced discharge gas through a second
air vent formed in the panel; and
the PDP subjected to the aging process has the following structure:
a plurality of discharge spaces are formed by arranging a plurality of partitions to
divide up the inner space between the front plate and the back plate;
a sealing glass layer for sealing the front plate to the back plate is included
between the perimeters of the front plate and the back plate;
a first space connected to the discharge spaces formed by the plurality of
partitions is formed between first ends of the plurality of partitions and the sealing glass layer,
a second space connected to the discharge spaces is formed between second ends
of the plurality of partitions and the sealing glass layer,
the first air vent is formed to connect with the first space, and
the second air vent is formed to connect with the second space,
and wherein the above structure is subject to an aging process in which the
discharge gas is circulated through the discharge space by performing the introducing process by
introducing the discharge gas into the first space via the first air vent, and the evacuating process
by evacuating the discharge gas from the second space via the second air vent.

128. (Previously Presented) The PDP of Claim 112, further including a structure in
which the first air vent is formed in the vicinity of one of the outermost portions, and the second

3 air vent is formed in the vicinity of the other outermost partition, on an opposite side to the first
4 air vent.

1 129. (Previously Presented) The PDP manufacturing method of Claim 112, wherein
2 the introducing process introduces the discharge gas via a first air vent formed in the panel;
3 the evacuating process evacuates the introduced discharge gas through a second
4 air vent formed in the panel; and the PDP subjected to the aging process has the following
5 structure:

6 a plurality of discharge spaces are formed by arranging a plurality of partitions to
7 divide up the inner space between the front plate and the back plate;

8 a sealing glass layer for sealing the front plate to the back plate is included
9 between the perimeters of the front plate and the back plate;

10 a barrier is included between the front plate and the back plate, around the inside
11 of the sealing glass layer;

12 a first space connected to the discharge spaces formed by the plurality of
13 partitions is formed between first ends of the plurality of partitions and the barrier;

14 a second space connected to the discharge spaces is formed between second ends
15 of the plurality of partitions and the barrier;

16 the first air vent is formed to connect with the first space; and

17 the second air vent is formed to connect with the second space,

18 wherein the above structure is subject to an aging process in which the discharge
19 gas is circulated through the discharge space by performing the introducing process by

20 introducing the discharge gas into the first space via the first air vent, and the evacuating process
21 by evacuating the discharge gas from the second space via the second air vent.

1 130. (Cancelled)

1 131. (Currently Amended) A plasma display panel (PDP) manufacturing method, for
2 manufacturing a PDP comprising a front plate (10), and a back plate (20), on at least one of
3 which discharge electrodes (12) have been arranged and on at least one of whose inner surfaces a
4 blue phosphor layer containing BaMgAl₁₀O₁₇: Eu (25) has been formed, the front and back plates
5 being sealed together so that an inner space is formed therebetween, and an aging process then
6 being performed by applying a required discharge voltage to the discharge electrodes (12) while
7 a discharge gas is present in the inner space,

8 the aging process comprising:

9 an introducing process for introducing discharge gas into the inner space from
10 outside; and

11 an evacuating process for evacuating the discharge gas from the inner space,

12 the introducing process and the evacuating process taking place with respect to
13 each other to enable discharge to be produced by applying a required discharge voltage to the
14 discharge electrodes (12) while circulating discharge gas through the inner space,

15 characterized in that the discharge gas introduced in the introducing process has a
16 partial steam pressure of no more than 2.0 kPa (15 Torr), and in the aging process the discharge
17 gas is circulated intermittently through the inner space.

1 132. (Previously Presented) A PDP manufacturing method according to claim 131,
2 wherein the discharge produced when a required discharge voltage is applied to the discharge

electrodes (12) is divided into a plurality of discharge periods, and the introducing process and the evacuating process are performed in intervals between discharge periods, enabling the discharge gas to be circulated through the inner space.

133. (Previously Presented) The PDP manufacturing method of claim 131, wherein the discharge gas introduced into the inner space is a dry gas.

134. (Previously Presented) The PDP manufacturing method of claim 132, wherein the discharge gas introduced into the inner space is a dry gas.

135. (Previously Presented) The PDP manufacturing method of claim 134, wherein the discharge gas introduced into the inner space is an inert gas.

136. (Previously Presented) The PDP manufacturing method of claim 135, wherein the inert gas includes one of helium, neon, argon and xenon.

137. (Previously Presented) The PDP manufacturing method of claim 131, wherein the introducing process introduces the discharge gas via a first air vent (65a) formed in the panel; the evacuating process evacuates the introduced discharge gas through a second air vent (65b) formed in the panel; and

the PDP subjected to the aging process has the following structure:

a plurality of discharge spaces (30) are formed by arranging a plurality of partitions (61) to divide up the inner space between the front plate (10) and the back plate (20);

a sealing glass layer (62,64) for sealing the front plate (10) to the back plate (20) is included between the perimeters of the front plate and the back plate;

10 a first space (66a) connected to the discharge spaces formed by the plurality of
11 partitions (61) is formed between first ends of the plurality of partitions and the sealing glass
12 layer (62),
13 a second space (66b) connected to the discharged spaces is formed between
14 second ends of the plurality of partitions and the sealing glass layer,
15 the first air vent (65a) is formed to connect with the first space (66a), and
16 the second air vent (65b) is formed to connect with the second space (66b),
17 and wherein the above structure is subject to an aging process in which the
18 discharge gas is circulated through the discharge space by performing the introducing process by
19 introducing the discharge gas into the first space via the first air vent, and the evacuating process
20 by evacuating the discharge from the second space via the second air vent.

1 138. (Previously Presented) The method of claim 137, wherein the PDP has a structure
2 in which the discharge gas mainly flows through a plurality of gas passages (67) leading from the
3 first space (66a) into the second space (66b).

1 139. (Previously Presented) The method of claim 138, wherein the PDP has a structure
2 in which a minimum distance between partition ends (63) of the plurality of partitions (61),
3 excluding at least a partition furthest from the first air vent (65a), and the sealing glass layer (62)
4 bordering the first space (66a) is more than a minimum distance between the sealing glass layer
5 (64) parallel to the partitions and an adjacent partition.

1 140. (Previously Presented) The method of claim 138, wherein the PDP has a structure
2 in which one part of each outermost partition among the plurality of partitions is connected with

3 one part of the sealing glass layer (64) to prevent discharge gas from flowing into space between
4 the outermost partitions and the sealing glass layer.

1 141. (Previously Presented) The method of claim 139, wherein the PDP further
2 includes a structure in which the first air vent (65a) is formed in the vicinity of one of the
3 outermost partitions, and the second air vent (65b) is formed in the vicinity of the other
4 outermost partition, on an opposite side to the first air vent.

1 142. (Previously Presented) The method of claim 140, wherein the PDP further
2 includes a structure in which the first air vent (65a) is formed in the vicinity of one of the
3 outermost partitions, and the second air vent (65b) is formed in the vicinity of the other
4 outermost partition, on an opposite side to the first air vent.

1 143. (Previously Presented) The PDP manufacturing method of claim 132, wherein
2 the introducing process introduces the discharge gas via a first air vent (65a) formed in the panel;
3 the evacuating process evacuates the introduced discharge gas through a second
4 air vent (65b) formed in the panel; and

5 the PDP subjected to the aging process has the following structure:

6 a plurality of discharge spaces (30) are formed by arranging a plurality of
7 partitions (61) to divide up the inner space between the front plate (10) and the back plate (20);

8 a sealing glass layer (62,64) for sealing the front plate (10) to the back plate (20)
9 is included between the perimeters of the front plate and the back plate;

10 a first space (66a) connected to the discharge spaces formed by the plurality of
11 partitions (61) is formed between first ends of the plurality of partitions and the sealing glass
12 layer (62),

13 a second space (66b) connected to the discharged spaces is formed between
14 second ends of the plurality of partitions and the sealing glass layer,
15 the first air vent (65a) is formed to connect with the first space (66a), and
16 the second air vent (65b) is formed to connect with the second space (66b),
17 and wherein the above structure is subject to an aging process in which the
18 discharge gas is circulated through the discharge space by performing the introducing process by
19 introducing the discharge gas into the first space via the first air vent, and the evacuating process
20 by evacuating the discharge from the second space via the second air vent.

1 144. (Previously Presented) The PDP manufacturing method of claim 131, wherein
2 the introducing process introduces the discharge gas via a first air vent (65a) formed in the panel;
3 the evacuating process evacuates the introduced discharge gas through a second
4 air vent (65b) formed in the panel; and
5 the PDP subjected to the aging process has the following structure:
6 a plurality of discharge spaces (30) are formed by arranging a plurality of
7 partitions (61) to divide up the inner space between the front plate (10) and the back plate (20);
8 a sealing glass layer (62,64) for sealing the front plate to the back plate is included
9 between the perimeters of the front plate and the back plate;
10 a barrier (81,82) is included between the front plate and the back plate, around the
11 inside of the sealing glass layer;
12 a first space (66a) connected to the discharge spaces formed by the plurality of
13 partitions is formed between first ends of the plurality of partitions and the barrier;

14 a second space (66b) connected to the discharge spaces is formed between second
15 ends of the plurality of partitions and the barrier;

16 the first air vent (65a) is formed to connect with the first space; and

17 the second air vent (65a) is formed to connect with the second space,

18 wherein the above structure is subject to an aging process in which the discharge
19 gas is circulated through the discharge space by performing the introducing process by
20 introducing the discharge gas into the first space via the first air vent, and the evacuating process
21 by evacuating the discharge gas from the second space via the second air vent.

1 145. (Previously Presented) The PDP manufacturing method of claim 132, wherein
2 the introducing process introduces the discharge gas via a first air vent (65a) formed in the panel;
3 the evacuating process evacuates the introduced discharge gas through a second
4 air vent (65b) formed in the panel; and the PDP subjected to the aging process has the following
5 structure:

6 a plurality of discharge spaces (30) are formed by arranging a plurality of
7 partitions (61) to divide up the inner space between the front plate (10) and the back plate (20);

8 a sealing glass layer (62,64) for sealing the front plate to the back plate is included
9 between the perimeters of the front plate and the back plate;

10 a barrier (81,82) is included between the front plate and the back plate, around the
11 inside of the sealing glass layer;

12 a first space (66a) connected to the discharge spaces formed by the plurality of
13 partitions is formed between first ends of the plurality of partitions and the barrier;

14 a second space (66b) connected to the discharge spaces is formed between second
15 ends of the plurality of partitions and the barrier;
16 the first air vent (65a) is formed to connect with the first space; and
17 the second air vent (65a) is formed to connect with the second space,
18 wherein the above structure is subject to an aging process in which the discharge
19 gas is circulated through the discharge space by performing the introducing process by
20 introducing the discharge gas into the first space via the first air vent, and the evacuating process
21 by evacuating the discharge gas from the second space via the second air vent.

1 146. (Previously Presented) The method of claim 145, wherein the PDP has a structure
2 in which the discharge gas mainly flows through a plurality of gas passages (67) leading from the
3 first space into the second space.

1 147. (Previously Presented) The method of claim 146, wherein the PDP has a structure
2 in which a minimum distance between partition ends (63) of the plurality of partitions (61),
3 excluding at least a partition furthest from the first air vent (65a), and the barrier (81) bordering
4 the first space (66a) is more than a minimum distance between the barrier (82) parallel to the
5 partitions and an adjacent partition.

1 148. (Previously Presented) The method of claim 146, wherein the PDP further
2 includes a structure in which one part of each outermost partition among the plurality of
3 partitions (61) and one part of the barrier (82) are connected to prevent discharge gas from
4 flowing into space between the outermost partitions and the barrier.

1 149. (Previously Presented) The method of claim 147, wherein the PDP has a structure
2 in which the first air vent (65a) is formed in the vicinity of one of the outermost partitions, and
3 the second air vent (65b) is formed in the vicinity of the other outermost partition, on an opposite
4 side to the first air vent.

1 150. (Previously Presented) The method of claim 148, wherein the PDP has a structure
2 in which the first air vent (65a) is formed in the vicinity of one of the outermost partitions, and
3 the second air vent (65b) is formed in the vicinity of the other outermost partition, on an opposite
4 side to the first air vent.